



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

0000012

EPA Region 5 Records Ctr.



247049

REPLY TO THE ATTENTION OF:

SE-5J

**MEMORANDUM**

**DATE:**

DEC 28 2000

**SUBJECT:** ACTION MEMORANDUM - Request for an Emergency Response  
Action at the Stickney Alley Mercury Spill Site, Village of Stickney, Cook  
County, Illinois. ( Site ID # B5R7 )

**FROM:** Charles Gebien, On-Scene Coordinator  
Emergency Response Section II

**TO:** Richard Karl, Chief  
Emergency Response Branch

**THRU:** William Bolen, Chief  
Response Section 2

**I. PURPOSE**

The purpose of this memorandum is to request and document your approval to expend up to \$33,920 and to confirm your verbal approval for \$25,000 given on September 29, 2000, to mitigate threats to public health, welfare, and the environment at the Stickney Alley Mercury Spill Site located in the Village of Stickney, Cook County, Illinois. The response action was necessary to mitigate the immediate threat to public health, welfare, and the environment posed by the release of metallic mercury onto the public alleyway behind the 4200 block of South Harlem Avenue (Site).

The emergency response action was conducted pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), as amended, by locating, recovering, and cleaning up mercury spilled in the alley. The response action included the off-site disposal of the mercury and mercury-contaminated media (shoes, trash, spent cleaning materials, etc.).

The Site required three on-site working days to complete. The removal action was considered an emergency due to the presence of metallic mercury in the alley, adjacent parking areas and elevated mercury vapor levels throughout the site, which threatened the health and welfare of the nearby residents.

The Stickney Alley Mercury Spill Site is not on the National Priorities List (NPL).

## **II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID # ILN000508105

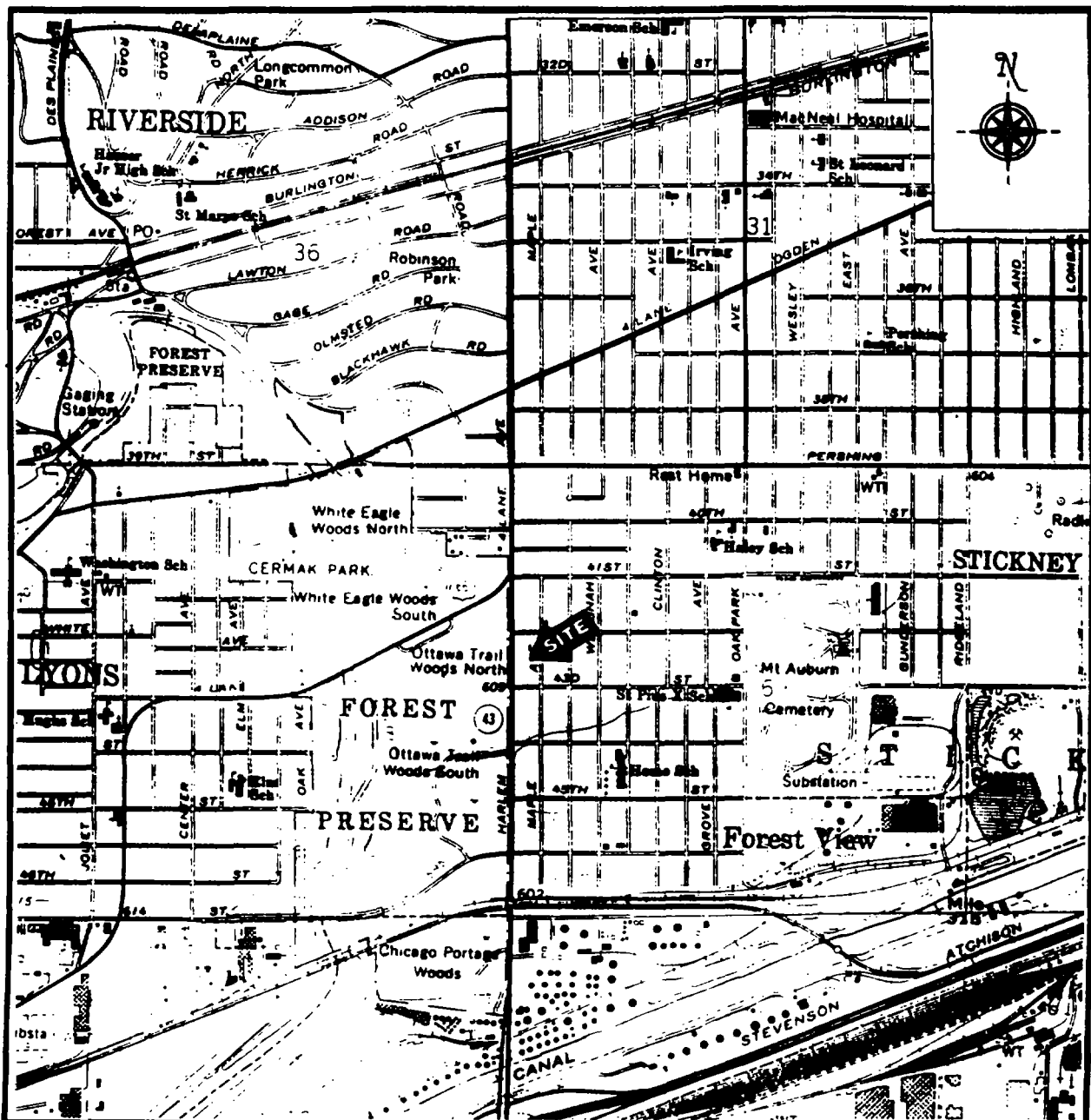
### **A. Physical Location and Description**

The Stickney Alley Mercury Spill Site is located in the alleyway between Maple Street and Harlem Ave from 4200 South to 4300 South in the Village of Stickney, Cook County, Illinois. The Site coordinates are latitude 41° 48' 54.0" north and longitude 87° 48' 06" west.

To meet the Environmental Justice (EJ) concern criteria, the area within 1 mile of the site must have a population that's twice the state low-income percentage or/and twice the state minority percentage. That is, the area must be at least 58% low-income and/or 50% minority. At this Site, the low-income percentage is 21.6% and the minority percentage is 2.78%, as determined by Landview III EJ analysis. Therefore, this Site does not meet the Region's EJ criteria based on demographics as identified in "Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case, June 1998".

### **B. Site Background**

On September 27, 2000 at 10:07 am, the Stickney Fire Department (SFD) received a telephone report from [REDACTED] of [REDACTED] of a likely mercury spill from an unknown source in the alley behind his garage. The SFD responded and verified the presence of a pool of mercury on the concrete alley. SFD Chief Larry Meyer contacted the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) and the Illinois EPA, and dispatched a hazmat team to secure the scene. After receiving a list of cleanup contractors from Illinois EPA, Chief Meyer contacted Superior Environmental Services to perform a cleanup. Superior dispatched a cleanup crew from Marine Pollution Control (MPC) which arrived on-scene at 1:30 pm. MPC used a HEPA vac to collect approximately 15 pounds of the pooled mercury and particulate matter from the pavement. MPC visually surveyed the alley and observed mercury droplets scattered in the alley from the block of 4200 to 4300, and suspected that the mercury was tracked by vehicles. Don Klopke of the IEPA Emergency Response Desplaines Office arrived at about 4:00 pm and called the U.S. EPA Region 5 spill phone to request U.S. EPA assistance. On-scene Coordinator (OSC) Charles Gebien was dispatched to the incident and arrived at about 5:00 pm. James Chodora,



Quadrangle Location



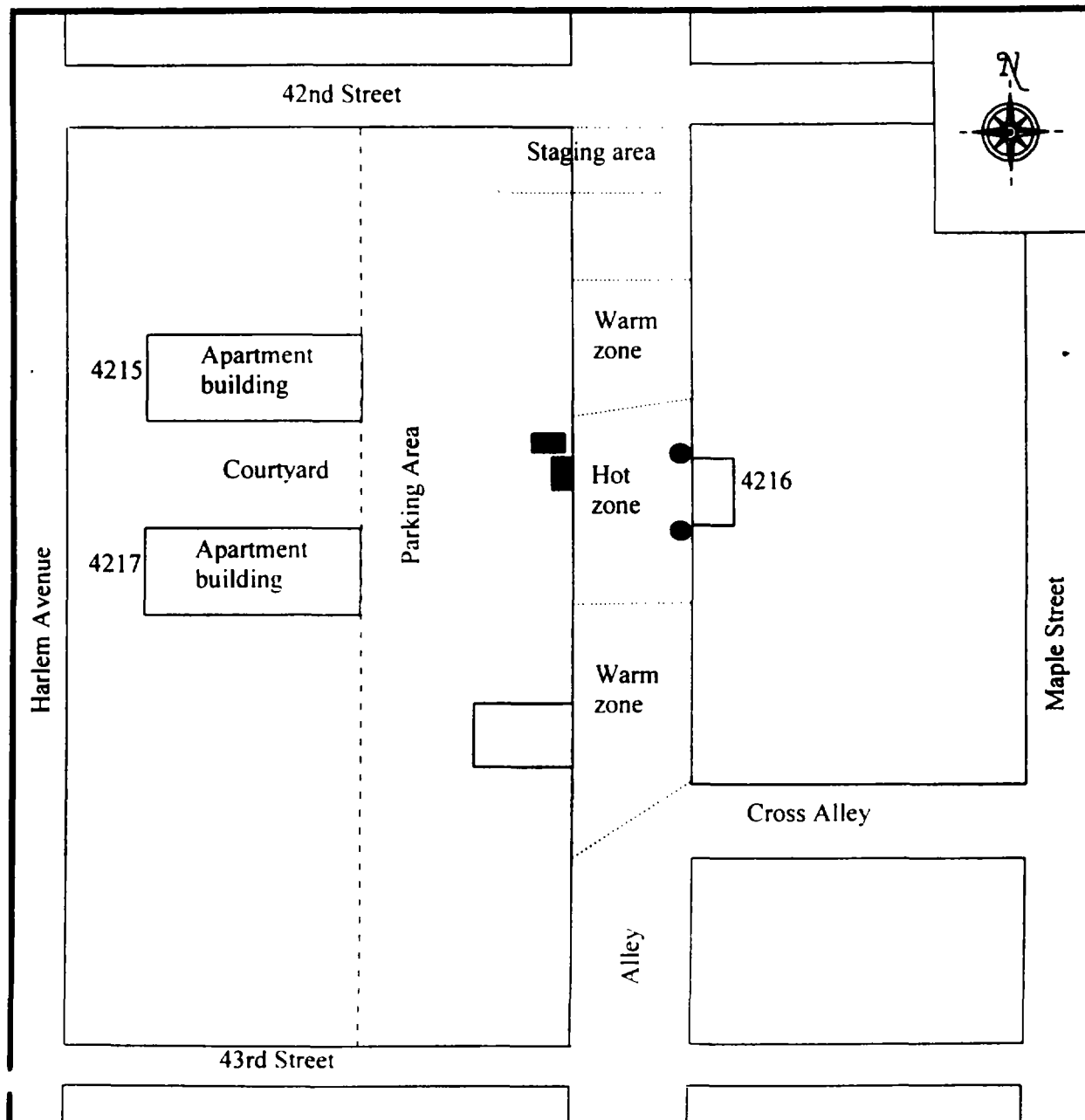
Illinois

**EPA**  
EMERGENCY

**U.S. EPA Region 5**

RESPONSE BRANCH

Title	Site Location Map	Figure	1
Site	Stickney Mercury Spill	Scale	1:24,000
City	Stickney	State	Illinois
Source	U.S.G. S. 7.5 Minute Series - Berwyn, IL Quadrangle	TDD	S05-0009-026
		Date	1963
		Revised	1980



#### Legend

- Roll-out container
- Dumpster
- Garage

**EPA U.S. EPA Region 5**  
**EMERGENCY RESPONSE BRANCH**

Title	Site Features Map	Figure	2
Site	Stickney Mercury Spill	Scale	Not to scale
City	Stickney	State	Illinois
Source	Ecology and Environment, Inc.	TDD	S05-0009-026
		Date	2000
		Revised	

Pollution Control Officer of the Metropolitan Water Reclamation District was also present at the scene. At the request of Chief Meyer and IEPA, OSC Gebien arranged for START and a U.S. EPA cleanup contractor Ferguson Harbors Inc. (FHI) to be dispatched to the scene to complete the cleanup operations. An emergency task order for \$25,000 was issued to FHI. Illinois EPA dispatched a team from the Illinois Dept. of Public Health (IDPH) to monitor mercury vapors in nearby residences and provide information regarding mercury to the public. Leo Rosalles, U.S. EPA office of Public Affairs, the U.S. EPA Criminal Investigation Division (CID) and the FBI and were called to the scene.

During the evening of Wednesday September 27, 2000, OSC Gebien and START confirmed the presence of mercury droplets in the alley with MPC and IEPA. MPC marked the droplet locations with chalk. Using a list assembled by SFD, the IDPH team visited residences to monitor mercury vapors using Jerome mercury vapor analyzers (Jeromes). FHI used flashlights and Jeromes to inspect the tires on cars parked near the alley. Village of Stickney workers used a bobcat to remove concrete barriers between parking areas to allow for evacuation of cars without using the contaminated alley. About 50 cars were driven away from the area by their owners after the car interiors were checked with Jeromes for mercury. Overnight, the Village of Stickney assembled a follow up list of 18 homes to be checked for mercury. START, police, and the school principal visited the Homes Elementary School at 4400 S. Home Ave to check for mercury contamination. The Jerome was used and no mercury was detected. During the evening, four teenaged boys crossed the caution tape and walked thru the alley. A Jerome was used to identify to presence of mercury on the soles of the shoes and the shoes were held for cleaning. The boys were taken home by the police. The police guarded the area throughout the night.

On Thursday September 28, 2000, members of the local television and newspaper media were present throughout the day. FHI cleaned the previously marked hot areas within the parking areas and alley using HEPA vacs and HgX solution. Mercury vapor concentrations ranged from .007 to .035 mg/cubic meter prior to cleaning. Thirty five gallons of Behr's N0980 concrete sealer was applied to the cleaned areas of the alley. IDPH continued to monitor residences for mercury contamination. CID, Illinois EPA and the OSC searched the dumpsters and garbage containers in the alley for evidence. The garbage in two containers was slightly contaminated and was removed for disposal as mercury contaminated debris. The south 1/3rd of the alley was cleared of mercury contamination and was reopened. The remaining areas were patrolled overnight.

On Friday September 29, 2000, FHI and START walked the site using Jeromes to confirm the cleanup of mercury. No mercury droplets were observed and no mercury vapors were detected in the area. The cleaned shoes were returned to the teenagers' parents. One steel 55-gallon drum of high level mercury debris, five steel 55-gallon drums of low level mercury debris, one fibre 55-gallon drum of low level debris, and two plastic 5-gallon buckets of mercury cleaning solution were transported by FHI to Heritage Environmental, Lemont, Illinois via Illinois Hazardous Waste Manifest # IL

9245930. IDPH completed the screening of 21 nearby homes for mercury contamination, and found that one home located at [REDACTED] was possibly contaminated with trace levels of mercury. IDPH requested that U.S. EPA retest the home with a LUMEX mercury vapor analyzer, to verify IDPH's findings. FHI demobed from the site and the Village of Stickney later reopened the remainder of the alley to the public, after the concrete sealer was completely dried.

On Saturday September 30, 2000, OSC Stavros Emmanouil and START visited the home at [REDACTED] to retest for mercury vapors with a LUMEX. The highest concentrations found in the home were 30 nanograms, well under the 300 nanogram level of concern recommended by ATSDR. The data was communicated to the homeowner and was faxed to IDPH.

### **III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

The conditions at the Site presented a release and a potential threat of release of a CERCLA hazardous substance, presenting an imminent and substantial endangerment to the public health, welfare, and the environment, and met the criteria for an emergency removal action provided for in the National Contingency Plan (NCP), 40 C.F.R. § 300.415(b)(2). These criteria include:

- 1) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

This factor was present at the Site due to the presence of metallic mercury in the alley and the associated vapor levels posing a serious threat to the residents that live adjacent to the alley. Mercury vapor levels in the alley were measured at 35 to 77  $\mu\text{g}/\text{m}^3$ , which are elevated well above the ATSDR recommended indoor removal action level of 0.3  $\mu\text{g}/\text{m}^3$ . The potential existed for the mercury to be tracked by vehicles and pedestrians using the alley to surrounding streets and residences, if it were not appropriately disposed. During the response, four teenagers disregarded barriers and barrier tape and entered the mercury contaminated alley. The teenagers were stopped by the SFD, their shoes were tested with a Jerome, and the soles were found to be contaminated with mercury. All of the shoes were confiscated and cleaned to prevent the further tracking of mercury into homes.

Mercury poses a threat through inhalation, ingestion, and direct contact routes of exposure, and can result in severe nausea, vomiting, abdominal pain, bloody diarrhea, kidney and liver damage, and even death. Metallic mercury is highly toxic when inhaled, and attacks the central nervous system by destroying neurons.

Mercury is a characteristic waste under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq., as amended, and 40 CFR § 261.24. Mercury

exhibits the characteristic of toxicity D009, and is therefore a hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

- 2) The availability of other appropriate federal or state response mechanisms to respond to the release;

The Illinois EPA and Village of Stickney do not have the financial resources and expertise to conduct a mercury cleanup involving such a large area. After exhausting the Village of Stickney's emergency response cleanup contractor resources, the Village of Stickney and Illinois EPA requested that the Site be cleaned up by U.S. EPA in order to eliminate the health threat.

#### **IV. ENDANGERMENT DETERMINATION**

Given the Site conditions, the nature of the suspected hazardous substances on-site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may have presented an imminent and substantial endangerment to public health, welfare, or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS**

The purpose of this emergency removal action was to mitigate the immediate threats posed to the public health, welfare, or the environment by the presence of the metallic mercury and the associated elevated mercury vapor levels. Removal activities at the Site included the recovery of all metallic mercury from the alley and adjacent parking areas, the identification and disposal of all mercury-contaminated media and the off-site disposal of all characterized wastes identified and collected during removal activities. Specifically, the following actions were performed:

- 1) Developed and implemented a site-specific health and safety plan, including an air monitoring plan;
- 2) Confirmed and characterized the extent of mercury contamination in the alley, in adjacent parking areas and on vehicle tires/interiors parked at the Site.
- 3) Assisted IDPH in screening nearby homes referred for characterization by Village of Stickney and IDPH officials;
- 4) HEPA vacuummed and decontaminated affected concrete alley and asphalt parking areas, and applied concrete sealer the affected alley;
- 5) Conducted air confirmation sampling and visual inspection to verify that the alley and parking areas were decontaminated to acceptable levels;

- 6) Cleaned, tested, and returned shoes that were accidentally contaminated of during the removal activities; and
- 7) Removed, transported and disposed of all hazardous substances, pollutants, wastes, or contaminants at a RCRA-approved disposal facility, in accordance with the U.S. EPA Off-Site Rule, 40 CFR § 300.440, 58 Federal Register 49215 (September 22, 1993).

Removal activities required 3 on-site working days to complete. The threat posed by the presence of metallic mercury and mercury vapor at the Site met the criteria listed in § 300.415(b)(2) of the NCP and the removal actions undertaken were consistent with any long-term remedial action which may be required.

The OSC has initiated planning for the provision of post-removal Site control, consistent with the provisions of § 300.415(l) of the NCP. The nature of this emergency removal action (complete removal of mercury and mercury-contaminated media from the Site) eliminated the need for any post-removal Site control.

The detailed cleanup contractor cost estimate is presented in Attachment 1 and estimated project costs are summarized below:



## REMOVAL PROJECT CEILING ESTIMATE

### EXTRAMURAL COSTS:

Cleanup Contractor	\$25,000
Contingency (0% Response Completed)	<u>0</u>
Subtotal	\$25,000
Total START	<u>5,000</u>
Extramural Subtotal	\$30,000
Extramural Contingency (0% Response Completed)	<u>0</u>
TOTAL EXTRAMURAL COSTS	\$30,000

### INTRAMURAL COSTS:

U.S. EPA Direct Costs [\$30 X (40 Regional Hours + 4 HQ Hours)]	\$ 1,320
U.S. EPA Indirect Costs (\$65 X 40 Regional Hours)	<u>\$ 2,600</u>
TOTAL INTRAMURAL COSTS	\$ 3,920 =====
TOTAL REMOVAL PROJECT CEILING ESTIMATE	\$ 33,920

The response actions described in this memorandum directly addressed the actual or threatened releases of hazardous substances, pollutants, or contaminants at this Site, which may have posed an imminent and substantial endangerment to public health, welfare, or the environment. These response actions did not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

### Applicable or Relevant and Appropriate Requirements

All applicable, relevant, and appropriate requirements (ARARs) were complied with to the extent practicable. Federal ARARs for this Site include RCRA as administered by the State of Illinois. As a RCRA characteristic waste (D009), the mercury waste streams were packaged and manifested in accordance with 49 CFR 171-179 and with the Illinois Uniform Manifest Requirements. Representatives for the Illinois EPA, IDPH, MWRDGC, and the Mayor of the Village of Stickney were included in the unified

incident command structure for this emergency response. IDPH used the ATSDR recommended indoor removal action level of  $0.3 \mu\text{g}/\text{m}^3$  for screening nearby homes. None of the homes exceeded the indoor removal action level, and as a result, response activities did not involve indoor cleanup.

**VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Given the Site conditions, the nature of the hazardous substances documented on-site, and the potential exposure pathways to nearby populations described in Sections II and III above, *actual or threatened release of hazardous substances from the Site, if not* addressed by implementing the response actions selected in this Action Memorandum, would have presented an imminent and substantial endangerment to public health, welfare, or the environment.

**VII. OUTSTANDING POLICY ISSUES**

This removal action involved no outstanding policy issues.

**VIII. ENFORCEMENT**

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

**IX. RECOMMENDATION**

This decision document represents the selected removal action for the Stickney Alley Mercury Spill Site developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision was based upon the Administrative Record for the Site (See Attachment 2). Because the conditions at the Site met the NCP § 300.415(b)(2) criteria for an emergency removal action, I recommend your approval of this removal action. The total project ceiling, if approved, will be \$33,920, of which, an estimated \$25,000 may be used for cleanup contractor costs. You may indicate your decision by signing below:

APPROVE: \_\_\_\_\_

Chief, Emergency Response Branch

DATE: \_\_\_\_\_

12/28/00

DISAPPROVE: \_\_\_\_\_

Chief, Emergency Response Branch

DATE: \_\_\_\_\_

Enforcement Addendum

Attachments

1. Detailed Cleanup Contractor Cost Estimate
2. Administrative Record Index
3. Region V EJ Analysis

cc: C. Beasley, U.S. EPA, 5202-G  
M. Chezik, U.S. Department of the Interior, **w/o Enf. Addendum**  
T. Skinner, Illinois EPA, **w/o Enf. Addendum**  
S. Davis, Illinois DNR, **w/o Enf. Addendum**

**ENFORCEMENT ADDENDUM**  
STICKNEY ALLEY MERCURY SPILL SITE  
STICKNEY, COOK COUNTY, ILLINOIS

DECEMBER 28, 2000

HAS BEEN REDACTED  
(1 PAGE)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

## ATTACHMENT 1

### DETAILED CLEANUP CONTRACTOR ESTIMATE

STICKNEY ALLEY MERCURY SPILL SITE  
STICKNEY, COOK COUNTY, ILLINOIS  
OCTOBER 2000

The estimated cleanup contractor costs necessary to complete the removal action at the Site are as follows:

Personnel	\$15,000
Equipment	\$ 3,000
Subcontractors	\$ 3,500
Materials	<u>\$ 3,500</u>
<b>TOTAL</b>	<b>\$25,000</b>

## ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY  
REMOVAL ACTIONADMINISTRATIVE RECORD  
FOR  
STICKNEY ALLEY MERCURY SPILL SITE  
VILLAGE OF STICKNEY, COOK COUNTY, ILLINOISORIGINAL  
NOVEMBER 20, 2000

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	10/02/00	Gebien, C., U.S. EPA	Distribution List	POLREP #1 (Initial and Final) for the Stickney Alley Mercury Spill Site	3
2	10/02/00	Meyer, L., Stickney Fire Department	File	Memorandum re: September 27, 2000 Mercury Spill in Alley Behind Stickney Residence w/ Attachments	8
3	11/07/00	Ecology and Environment, Inc.	U.S. EPA	Letter Report for the Stickney Mercury Spill Site	18
4	00/00/00	Gebien, C., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Request for an Emergency Response Action at the Stickney Alley Mercury Spill Site ( <b>PENDING</b> )	

ATTACHMENT 3

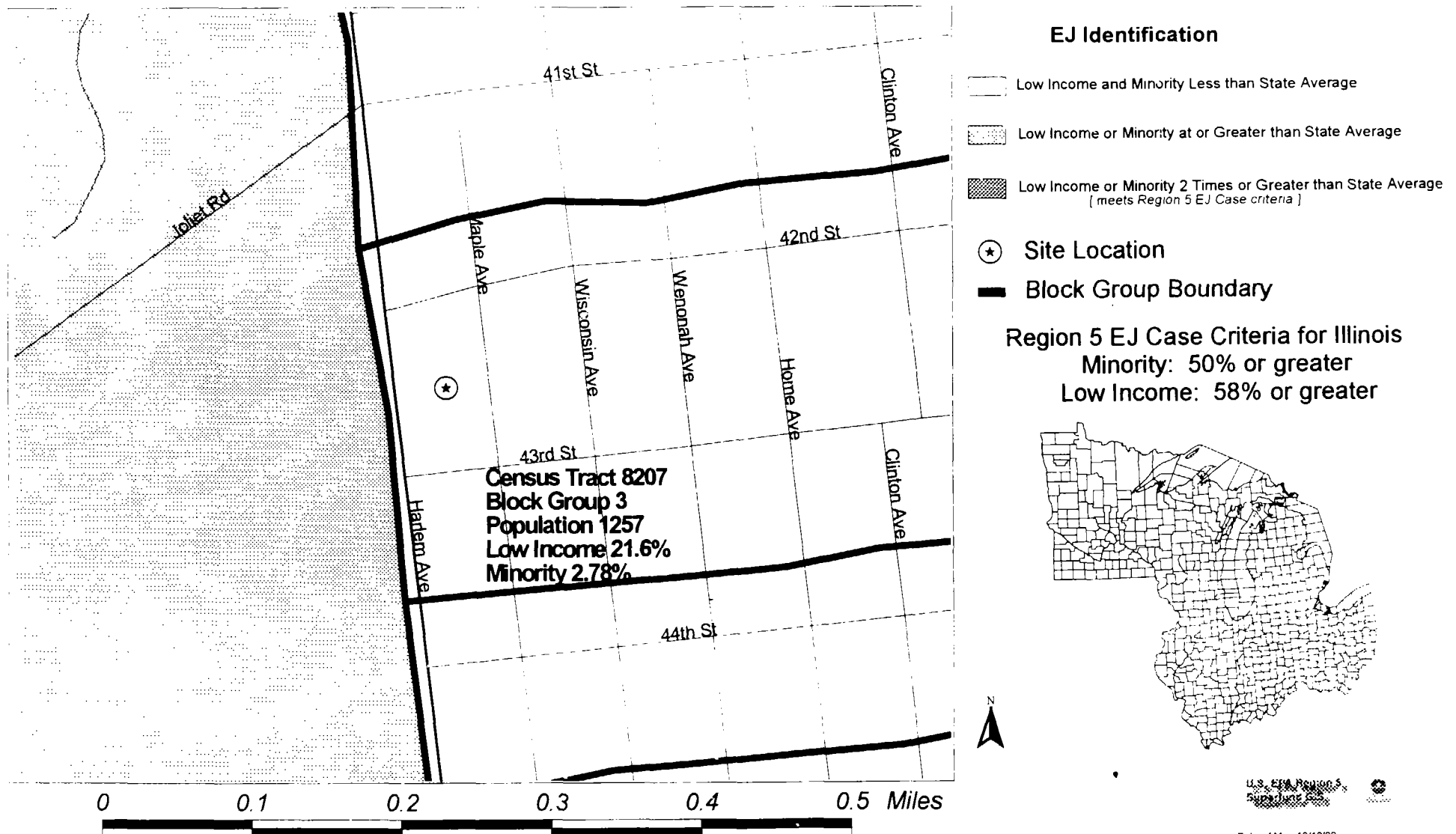
REGION V EJ ANALYSIS

STICKNEY ALLEY MERCURY SPILL SITE  
STICKNEY, COOK COUNTY, ILLINOIS  
OCTOBER 2000

# Region 5 Superfund EJ Analysis

## Stickney Alley Mercury Spill

## Stickney, IL



U.S. EPA Region 5  
Superfund

Date of Map 10/19/00

Source of Map 1990 Census Database



**INDEPENDENT GOVERNMENT COST ESTIMATE**

STICKNEY ALLEY MERCURY SPILL SITE  
STICKNEY, COOK COUNTY, ILLINOIS

DECEMBER 28, 2000

HAS BEEN REDACTED  
(1 PAGE)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION